

Appl. No. : 10/644,591
Filed : August 19, 2003

AMENDMENTS TO THE CLAIMS

Please cancel Claims 52-54 without prejudice.

1-54. (Cancelled)

Please add the following new claims:

55. An exercise apparatus comprising:

a rotatably mounted axle;

a weighted flywheel communicating with the axle and adapted to rotate with the axle;

a line having opposing first and second ends that are attached to the axle, a first portion of the line being wound about the axle in a first direction and a second portion of the line being wound about the axle in a second direction;

the line arranged so that, for each direction of axle rotation, as one of the first and second portions is unwound from the axle, the other of the first and second portions is simultaneously wound about the axle; and

at least one handle communicating with the lines and adapted to be operated by a user to manipulate the line to impart oscillating rotational acceleration and deceleration to the axle so that a first muscle group of the user performs a positive work portion and a second muscle group performs a negative work portion for each direction of axle rotation, and the positive and negative work aspects of the exercise oscillate between muscle groups each time the rotational direction of the axle changes.

56. The exercise apparatus of Claim 55, wherein the line and axle are configured so that as the axle rotates, the total amount of line coiled about the axle generally does not increase or decrease.

57. The exercise apparatus of Claim 55, wherein the line is generally contiguous between the first and second ends.

58. The exercise apparatus of Claim 55 additionally comprising a second axle spaced from the first axle, the second axle communicating with the first axle so that the second axle rotates with the first axle.

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59. The exercise apparatus of Claim 58, wherein the weighted flywheel is attached to the second axle.

60. The exercise apparatus of Claim 59, wherein the first and second axles are connected so that one rotation of the first axle corresponds to more than one rotation of the second axle.

61. The exercise apparatus of Claim 60, wherein the first and second axles are connected via a pulley system.

62. The exercise apparatus of Claim 55 additionally comprising a second handle communicating with the line and adapted to be operated by a user to manipulate the line.

63. The exercise apparatus of Claim 62 additionally comprising a pivot spaced from the axle, and the line changes direction at the pivot and is linearly movable relative to the pivot.

64. The exercise apparatus of Claim 62 additionally comprising first and second pivots spaced from the axle, and the line changes direction at the pivots and is linearly movable relative to the pivots.

65. The exercise apparatus of Claim 64, wherein the pivots comprise rollers

66. An exercise apparatus, comprising:

a frame configured to be supported on a substantially flat surface;

an axle rotatably mounted to the frame;

a weighted flywheel communicating with the axle and adapted to rotate with the axle;

a line having first and second ends, a wrapped portion of the line between the first and second ends being wrapped about the axle;

first and second handles attached to the line on opposite sides of the wrapped portion, the handles adapted to be operated by a user; and

a line guide between each handle and the wrapped portion;

wherein the apparatus is configured so that a user simultaneously applying force to the first handle with a first muscle group and the second handle with a second muscle group while the axle is rotating simultaneously performs positive work with the first muscle group and negative work with the second muscle group, and such positive and negative work oscillates between the first and second muscle groups as the rotational direction of the axle changes.

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67. The exercise apparatus of Claim 66, wherein the line is generally contiguous between the first and second handles.

68. The exercise apparatus of Claim 66, wherein the frame comprises a plurality of legs configured to support the axle above the flat surface.

69. The exercise apparatus of Claim 66, wherein the line guides comprise pivot points.

70. The exercise apparatus of Claim 66, wherein the line guides comprise rollers.

71. The exercise apparatus of Claim 66 additionally comprising a second axle spaced from the first axle, the second axle communicating with the first axle so that the second axle rotates with the first axle.

72. The exercise apparatus of Claim 71, wherein the weighted flywheel is attached to the second axle.

73. The exercise apparatus of Claim 72, wherein the first and second axles are connected so that one rotation of the first axle corresponds to more than one rotation of the second axle.